Listing of Claims:

Claims 1-31 (Cancelled).

32. (Previously presented) A non-human transgenic animal comprising a transgene comprising a nucleic acid molecule encoding a fusion protein which activates transcription of a gene of interest operatively linked to a target DNA sequence to which the fusion protein binds,

the fusion protein comprising a first polypeptide comprising a DNA binding domain operatively linked to a second polypeptide comprising a transcriptional activation domain, wherein the transcriptional activation domain comprises at least one copy of a mutated acidic region of herpes simplex virus virion protein 16 (HSV VP 16), the mutated acidic region consisting of amino acid positions 436 to 447 of HSV VP16 (SEQ ID NO:1)and having an amino acid substitution at position 442 as compared to wild type I-ISV VP 16,

the transgene being expressed in cells of the transgenic animal at a level sufficient to produce amounts of the fusion protein that can activate transcription of the gene of interest at detectable levels.

33. (Withdrawn) The transgenic animal of claim 32, wherein the mutated acidic region of HSV VP16 has the amino acid sequence of SEQ ID NO: 2.

34. (Withdrawn) The transgenic animal of claim 32, wherein the mutated acidic region of 1-ISV VPI6 has the amino acid sequence of SEQ ID NO: 3.

35. (Withdrawn) The transgenic animal of claim 32, wherein the transcriptional activation domain comprises the amino acid sequence of SEQ ID NO: 4.

36. (Withdrawn) The transgenic animal of claim 32, wherein the transcriptional activation domain comprises the amino acid sequence of SEQ ID NO: 5.

37. (Withdrawn) The transgenic animal of claim 32, wherein the transcriptional activation domain comprises the amino acid sequence of SEQ ID NO: 6.

38. (Withdrawn) The transgenic animal of claim 32, wherein the transcriptional activation domain comprises the amino acid sequence of SEQ ID NO: 7.

39. (Withdrawn) The transgenic animal of claim 32, wherein the transcriptional activation domain comprises the amino acid sequence of SEQ ID NO: 8.

40. (Previously presented) The transgenic animal of claim 32, wherein the first polypeptide is a Tet repressor.

41. (Previously presented) The transgenic animal of claim 32, wherein the first polypeptide is a mutated Tet repressor that binds to *tet*O sequences in the presence, but not in the absence, of tetracycline or a tetracycline analogue.

42. (Previously presented) The transgenic animal of claim 32, wherein the first polypeptide is selected from the group consisting of GAL4, LexA, LacR and steroid hormone receptors.

43. (Previously presented) A non-human transgenic animal comprising a transgene comprising a nucleic acid molecule encoding a fusion protein which activates transcription of a gene of interest operatively linked to a target DNA sequence to which the fusion protein binds,

the fusion protein comprising a first polypeptide comprising a DNA binding domain operatively linked to a second polypeptide comprising a transcriptional activation domain, wherein the transcriptional activation domain consists of three copies of an acidic region of herpes simplex virus virion protein 16 (HSV VP 16), the acidic region consisting of amino acid positions 436 to 447 of HSV VPI6 (SEQ ID NO:1),

the transgene being expressed in cells of the transgenic animal at a level sufficient to produce amounts of the fusion protein that can activate transcription of the gene of interest at detectable levels.

44. (Previously presented) The transgenic animal of claim 43, wherein the first polypeptide is a Tet repressor.

45. (Previously presented) The transgenic animal of claim 43, wherein the first polypeptide is a mutated Tet repressor that binds to *tet*O sequences in the presence, but not in the absence, of tetracycline or a tetracycline analogue.

46. (Previously presented) The transgenic animal of claim 43, wherein the first polypeptide is selected from the group consisting of GAL4, LexA, LacR and steroid hormone receptors.

47. (Previously presented) A non-human transgenic animal comprising a transgene comprising a nucleic acid molecule encoding a fusion protein which activates transcription of a gene of interest operatively linked to a target DNA sequence to which the fusion protein binds, the fusion protein comprising a first polypeptide comprising a DNA binding domain operatively linked to a second polypeptide comprising a transcriptional activation domain, wherein the transcriptional activation domain consists of four copies of an acidic region of herpes simplex virus virion protein 16 (HSV VP16), the acidic region consisting of amino acid positions 436 to 447 of HSV VP 16 (SEQ ID NO 1),

the transgene being expressed in cells of the transgenic animal at a level sufficient to produce amounts of the fusion protein that can activate transcription of the gene of interest at detectable levels.

48. (Previously presented) The transgenic animal of claim 47, wherein the first polypeptide is a Tet repressor.

49. (Previously presented) The transgenic animal of claim 47, wherein the first polypeptide is a mutated Tet repressor that binds to *tet*O sequences in the presence, but not in the absence, of tetracycline or a tetracycline analogue.

50. (Previously presented) The transgenic animal of claim 47, wherein the first polypeptide is selected from the group consisting of GAL4, LexA, LacR and steroid hormone receptors.

Claims 51-54. (Cancelled).

55. (Previously presented) The transgenic animal of any one of claims 32, 43, and 47, wherein the transgenic animal is selected from the group consisting of a goat, a sheep, and a cow.

56. (Previously presented) The transgenic animal of any one of claims 32, 43, and 47, wherein the transgenic animal is a mouse.